

REMARKS

Claims 1-26 are pending in the present Application. In the September 3, 2004 Office Action, Claims 1-20 are allowed, claims 24 and 25 are rejected under 35 U.S.C. § 112, claims 21-23 are rejected under 35 U.S.C. § 102, and claims 24-26 are rejected under 35 U.S.C. § 103. In response to the Office Action, Applicants are amending claims 21-24. No new matter has been added.

Rejection under 35 U.S.C. § 112

On page 2 of the Office Action, claims 24 and 25 are rejected under 35 U.S.C. § 112, second paragraph, “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.” Concerning claim 24, the Examiner states on page 2 of the Office Action that “the phrase ‘by a small multiple of a groove pitch’ is unclear.” In response, Applicants are amending claim 24 to recite “oscillating the linear CMP belt by an amplitude approximately equal to a multiple of a groove pitch of the linear CMP belt.” Support for this amendment is found, among other places, on page 9, lines 10-12 of the Application, which states “[t]he method is particularly effective when an amplitude of the lateral motion is a small multiple of the groove pitch”

Concerning claim 25, the Examiner states on page 2 of the Office Action that “the phrase ‘by an integer number of oscillations’ is unclear.” Applicants respectfully disagree. As stated on p. 9, lines 7-12 of the Application, “in some embodiments it is sufficient for the CMP belt 204 to cycle between the ends of its travel as little as a few times per minute. The method is particularly effective when . . . an integer number of oscillations occur within the polish time of the wafer.” In light of the specification as a whole, one skilled in the art would recognize an oscillation to mean a cycle between the ends of the CMP belt’s travel according to one embodiment.

Rejection under 35 U.S.C. § 102

On page 2 of the Office Action, claims 21-23 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,336,851 to Shendon (hereinafter, “Shendon”).

In response to the rejection of claim 21 under 35 U.S.C. § 102(b), Applicants are amending claim 21 to recite “a linear CMP belt forming a continuous loop around a roller and configured to be translated in a longitudinal direction, and means for laterally translating the linear CMP belt relative to the roller to cause an oscillatory relative lateral motion between the CMP belt and the rotatable wafer chuck.” In contrast to amended claim 21, Shendon does not teach or suggest “means for laterally translating the linear CMP belt relative to the roller.” Because Shendon does not teach each every claim limitation recited in claim 21, Applicants assert that claim 21 is allowable.

In response to the rejection of claims 22 and 23 under 35 U.S.C. § 102(b), Applicants have amended claim 22 to recite “the linear CMP belt forming a continuous loop around a roller; and laterally translating the linear CMP belt relative to the roller to cause a relative lateral motion between the rotating wafer and the linear CMP belt.” In contrast to amended claim 22, Shendon does not teach or suggest “laterally translating the linear CMP belt relative to the roller.” Because Shendon does not teach every claim limitation recited in amended claim 22, Applicants assert that amended claim 22 is allowable. Claim 23 depends from claim 22 and is allowable for at least the same reasons stated above for claim 22.

Rejection under 35 U.S.C. § 103

On page 3 of the Office Action, claims 24-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shendon, alone. Each of claims 24-26 depends indirectly from claim 22, which is allowable for the reasons provided hereinabove in the section entitled “Rejection under 35 U.S.C. § 102.” Because each of claims 24-26 includes the allowable subject matter of claim 22, Applicants assert that claims 24-26 are allowable.

Additionally, Applicants assert that the Examiner has not made out a prima facie case of obviousness under 35 U.S.C. § 103(a) because Shendon does not teach or suggest all of the claim limitations recited in each of claims 24-26. In rejecting claims 24-26, the Examiner states on page 3 of the Office Action that “Shendon does not disclose the oscillation rate. However, it would have been obvious design choice to oscillate the belt at various rates dependent on machining parameters.”

Concerning claim 24, Shendon does not teach or suggest “oscillating the linear CMP belt by an amplitude approximately equal to a multiple of a groove pitch of the linear CMP belt” as is recited in amended claim 24. Moreover, a groove pitch is not a machining parameter but instead is a characteristic of a linear CMP belt. As recited on page 8 of the present application, “[i]n some embodiments, the groove pitch, which is the spacing between adjacent grooves on the CMP belt 204, is about 0.1”. Further, amended claim 24 recites “oscillating the linear CMP belt by an **amplitude**” in contradistinction to an oscillation **rate**. For at least these additional reasons, Applicants assert that amended claim 24 is patentably distinct from Shendon and is therefore allowable.

Concerning the rejection of the claim 25, Shendon does not teach or suggest “oscillating the linear CMP belt by an integer number of oscillations within a polish time of the wafer” as is recited in claim 25. Moreover, an integer number of oscillations is not a machining parameter nor is a polish time. For at least these additional reasons, Applicants assert that claim 25 is patentably distinct from Shendon and is therefore allowable.

Concerning the rejection of the claim 26, Shendon does not teach or suggest “translating the linear CMP belt at an approximately constant rate between ends of travel” as is recited in claim 26. Moreover, a constant rate is not a machining parameter nor is the ends of travel. For at least these additional reasons, Applicants assert that claim 26 is patentably distinct from Shendon and is therefore allowable.

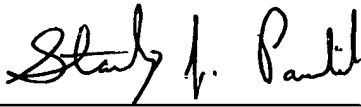
CONCLUSION

Based on the foregoing remarks, Applicants believe that the rejections in the September 3, 2004 Office Action are fully overcome, and that the Application is in condition for allowance. If the Examiner has questions regarding this case, the Examiner is invited to contact Applicants' undersigned representative at the number provided below.

Respectfully submitted,

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